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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/881,870

06/15/2001

Shuo-Yen Robert Li

Li 22

8519

7590

04/05/2005

John T. Peoples  
14 Blue Jay Court  
Warren, NJ 07059

EXAMINER

LEE, ANDREW CHUNG CHEUNG


ART UNIT

PAPER NUMBER

2664

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s) 	
	09/881,870	LI ET AL.	
	Examiner	Art Unit	
	Andrew C Lee	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 4-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-6, 11- 18 is/are allowed.
- 6) ☒ Claim(s) 4, 7 -10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 3A, Fig. 3B, Fig. 3C, the element "302"; Fig. 4, element "401"; Fig. 6, element "600"; Fig. 7A, Fig. 7B, Fig. 7C, the element "702"; Fig. 8A, Fig. 8B, Fig. 8C, the element "803"; Fig. 9, the elements "900" and "901". Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP

§ 608.01(o). Correction of the following is required: the limitation of "in the j-th node on the route  $2 \leq j \leq k$ " as disclosed in claim 16 (page 19 , line 11).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 7 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya (U.S. Patent No. 5353283) in view of Nakamura et al. (U.S. Patent No. 6553031 B1).

Regarding Claim 4, 7 – 10, Tsuchiya discloses the limitation of method, circuit, network for routing a packet through a network composed of a plurality of switches as nodes (Fig. 1, Fig. 7, Abstract, lines 1 – 7), the packet having a packet header containing routing information and destined to traverse the network via a route which is determined by a sequence of nodes (Fig. 6, column 5, lines 25 – 32), wherein the first of the sequence of nodes is the ingress node through which the packet enters the network, and the last of the sequence of nodes is the egress node through which the packet exits from the network (column 6, lines 50 – 61), the method comprising in the ingress node of the network, translating the routing information into the route encoded as a sequence

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of in-band control signals (column 5, lines 28 – 32; lines 35 – 64), Tsuchiya does not disclose expressly fragmenting the packet into cells of a fixed length, and affixing the sequence of in-band control signals in front of each one of the cells, in each one of the sequence of nodes on the route, including the ingress node and the egress node, deploying a corresponding one of the sequence of the in-band control signals in front of each one of the cells to guide said each one of the cells through said each one of the sequence of nodes, and consuming said corresponding in-band control signal from the sequence of the in-band control signals of said each one of the cells, and reassembling the cells into the packet in the egress node of the network. Nakamura et al. discloses the limitation of fragmenting the packet into cells of a fixed length (column 5, lines 29 – 30), and affixing the sequence of in-band control signals in front of each one of the cells, in each one of the sequence of nodes on the route, including the ingress node and the egress node (column 5, lines 38 – 43), deploying a corresponding one of the sequence of the in-band control signals in front of each one of the cells to guide said each one of the cells through said each one of the sequence of nodes (column 5, lines 42 – 43), and consuming said corresponding in-band control signal from the sequence of the in-band control signals of said each one of the cells (column 5, lines 44 – 54), and reassembling the cells into the packet in the egress node of the network (column 7, lines 42 – 66; column 8, lines 1 – 4). It would have been obvious to modify Tsuchiya to include fragmenting the packet into cells of a fixed length, and affixing the sequence of in-band control signals in

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front of each one of the cells, in each one of the sequence of nodes on the route, including the ingress node and the egress node, deploying a corresponding one of the sequence of the in-band control signals in front of each one of the cells to guide said each one of the cells through said each one of the sequence of nodes, and consuming said corresponding in-band control signal from the sequence of the in-band control signals of said each one of the cells, and reassembling the cells into the packet in the egress node of the network such as that taught by Nakamura et al. in order to provide a communication node apparatus capable of registering new routing information while avoiding a repetition of unreasonable updating processing of a cache memory to the utmost when the cache memory on each line interface board is filled up.

***Allowable Subject Matter***

5. Claims 5 – 6, 11 – 18 are allowed over prior art.

Prior art of record does not disclose, in single or in combination, the claimed affixing a cell header including said first in-band control signal, said route tag and said last in-band control signal in front of each one of the cells consuming said first in-band control signal from the cell header of said each one of the cells, in the  $j$ -th node on the route,  $2 \leq j \leq (k-1)$ , and inserting a  $j$ -th in-band control signal into the cell header of each one of the cells for the switching control over the switching fabric of said  $j$ -th node on the route, wherein said  $j$ -th in-band control signal is derived from the route tag in the cell header of each one of the cells

**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACL

AU:2664

March 26, 2005

  
**Ajit Patel**  
**Primary Examiner**